ADDITIONAL NOTES ON THE GENUS CITHAREXYLUM. V

Harold N. Moldenke

CITHAREXYLUM CHARTACEUM Moldenke

Additional bibliography: Moldenke, Phytologia 13: 284 & 304. 1966.

CITHAREXYLUM FRUTICOSUM L.

Additional bibliography: Moldenke, Phytologia 14: 433—435. 1967.

Sen & Naskar (1965) record this species as cultivated in India, but I have not as yet seen any specimens of it from that country.

CITHAREXYLUM KUNTHIANUM Moldenke

Additional bibliography: Sen & Naskar, Bull. Bot. Surv. India 7: 40. 1965; Moldenke, Phytologia 13: 295. 1966.

Sen & Naskar (1965) record this plant as cultivated in India, but I have as yet seen no actual specimens to substantiate this claim.

CITHAREXYLUM LUCIDUM Schlecht. & Cham.

Additional bibliography: Moldenke, Phytologia 13: 296. 1966.

Rzedowski refers to this plant as a shrub, 3 m. tall, and found it growing on limestone hills with Quercus and Liquidambar, at 1200 meters altitude.

Additional citations: MEXICO: San Luis Potosí: J. Rzedowski 10502 (Mi).

CITHAREXYLUM LYCIOIDES D. Don

Additional bibliography: Moldenke, Phytologia 13: 296, 311, & 316. 1966.

CITHAREXYLUM MACROPHYLLUM Poir.

Additional bibliography: Moldenke, Phytologia 13: 296—297, 302, & 314. 1966.

In addition to the comments given previously, Berti also says of this plant: "Arbol inerme, no lacticífero. Hojas simples, verticiladas de hasta 23 cm. de largo. Puntos pelúcidos ausentes. Glándulas foliares situadas en el ápice del pecíolo. Inflorescencia racimos espiciformes, axilares, verticilados. Flores zigomorfas. Corola 5-mera gamofila. Estambres 5. Cáliz gamofilo."

Additional citations: VENEZUELA: Delta Amacuro: Berti 166 (W—2458308, W—2458385).

CITHAREXYLUM MOCINNI D. Don

Additional bibliography: Moldenke, Phytologia 13: 298. 1966; Moldenke, Résumé Suppl. 14: 1. 1966.

Recent collectors describe this plant as a tree, 10—12 m. tall,

the trunk 12—20 cm. in diameter, growing as "an occasional tree" in deciduous forests with Podocarpus, Distylium, Ostrya, and Quercus or in "bosque mesófilo de encino y pino con Abies y Chiranthodendron", at altitudes of 1500—2700 meters, flowering in January and March, fruiting in March. The flowers on R. Mc Vaugh 23221 and Rzedowski & McVaugh 312 are described as "white"; the racemes on the former collection are to 42 cm. in length! Smith & Tejeda describe the fruit as orange in color; their collection, cited below, constitutes a herbarium voucher for plant samples used in the United States Department of Agriculture, Cancer Chemotherapy National Service Center, anti-tumor screening program.

Additional citations: MEXICO: Guerrero: Rzedowski & McVaugh 312 (Mi). Jalisco: R. McVaugh 23221 (Mi). Vera Cruz: Smith & Tejeda 4453 (W—2471186). HONDURAS: Morazán: Williams & Molina R. 13703 (Ws).

CITHAREXYLUM MONTANUM Moldenke

Additional bibliography: Moldenke, Mem. N. Y. Bot. Gard. 9: 176. 1955; Moldenke, Phytologia 13: 310. 1966.

CITHAREXYLUM MONTEVIDENSE (Spreng.) Moldenke

Additional bibliography: Chittenden, Roy. Hort. Soc. Dict. Gard. 1: 493. 1951; Moldenke, Phytologia 13: 298—299. 1966.

CITHAREXYLUM MYRIANTHUM Cham.

Additional bibliography: Moldenke, Phytologia 13: 299—300. 1966.

Woolston describes this plant as a tree, 6--10 m. tall, the bark gray-brown, smoothish, the flowers white, growing at the edge of woods, and called "sàrà-moroti".

Additional citations: PARAGUAY: Woolston 610 (S).

CITHAREXYLUM OLEINUM (Benth.) Moldenke

Additional synonymy: Citharexylum oleinum Moldenke, in herb.

Additional bibliography: Bocq., Rev. Verbenac. 197. 1863; Moldenke, Phytologia 13: 300--301. 1966.

Rzedowski describes the habitat of this plant as "Hab. ladera caliza con vegetación de encinar", at 1850 meters altitude; Quintero found it growing on a slope with pine-oak woods.

Additional citations: MEXICO: Hidalgo: Quintero 2856 (Mi). San Luis Potosí: J. Rzedowski 6030 (Du—513552).

CITHAREXYLUM PACHYPHYLLUM Moldenke

Additional bibliography: Moldenke, Phytologia 13: 301 (1966) and 14: 216. 1967.

CITHAREXYLUM PACHYPHYLLUM var. CANESCENS Moldenke

Bibliography: Moldenke, Phytologia 14: 216. 1967.

Citations: PERU: Ayacucho: Iltis, Iltis, Ugent, & Ugent 488

(Z--type).

CITHAREXYLUM PENTANDRUM Vent.

Additional bibliography: Bocq., Adansonia 2: 88, 123, & 130 (1862) and 3: 223. 1863; Bocq., Rev. Verbenac. 88, 123, 130, & 223. 1863; Liogier, Rhodora 67: 350. 1965; Jiménez, Supl. Cat. Fl. Doming. 1: 211. 1966; Moldenke, Phytologia 13: 287 & 301 (1966) and 14: 434. 1967.

xCITHAREXYLUM PERKINSI Moldenke

Emended synonymy: Citharexylum perkinsii Moldenke, Résumé Suppl. 10: 5, in syn. 1964; Liogier, Rhodora 67: 350. 1965.

Additional bibliography: Liogier, Rhodora 67: 350. 1965; Moldenke, Phytologia 13: 310 (1966) and 14: 431. 1967

The collectors of the three specimens cited below describe this plant as a tall shrub, 4 m. tall, with orange or bright-orange fruit [called "berries" in error by Webster & Proctor], growing in low mountain forests on jagged limestone outcrops, in montane rainforests on limestone hills, and in woods on the slopes and top of Dolphin Head in Jamaica, at altitudes of 1000—2500 feet, fruiting in July and August. Material has been misidentified and distributed in herbaria as C. caudatum L. The abundant fruits on the racemes cast some doubt on the hybrid nature of these plants, but the foliar characters are certainly intermediate between those of C. caudatum and C. spinosum L.

Additional citations: JAMAICA: Webster & Proctor 5414 (Mi); Webster, Proctor, & Powell 5358 (Mi); Webster & Wilson 5069 (Mi).

CITHAREXYLUM POEPPIGII Walp.

Additional bibliography: Bocq., Adansonia 3: [Rev. Verbenac.] 223. 1863; Moldenke, Phytologia 5: 95 (1954) and 13: 301—303. 1966.

Additional citations: VENEZUELA: Táchira: Steyermark & Rabe 96629 (Z).

CITHAREXYLUM POEPPIGII var. MARGARITACEUM Poepp. & Moldenke

Additional bibliography: Moldenke, Phytologia 5: 95 (1954) and 13: 302—303. 1966.

CITHAREXYLUM PUNCTATUM Greenm.

Emended synonymy: Aegiphila punctatum Greenm. ex Moldenke, Résumé Suppl. 12: 9, in syn. 1965; A. María, Pl. Valle Cochabamb. 2: 41. 1966.

Additional bibliography: A. María, Pl. Valle Cochabamb. 2: 41. 1966; Moldenke, Phytologia 13: 303 (1966) and 14: 435. 1967.

María (1966) cites his nos. 657/6a & 868/7a from Cochabamba, Bolivia. Cárdenas found the plant growing on rocky slopes at 3200 meters altitude.

Additional citations: BOLIVIA: Cochabamba: M. Cárdenas 6176 (W—2472185). Department undetermined: M. Bang 1917 (Ws—isotype).

CITHAREXYLUM QUERCIFOLIUM Hayek
Additional bibliography: Moldenke, Phytologia 13: 303 & 317. 1966.

CITHAREXYLUM SESSAEI D. Don
Additional bibliography: Moldenke, Phytologia 13: 312--313. 1966.

The Pringle 8969, distributed as C. sessaei, is actually the type collection of C. hidalgense Moldenke.

CITHAREXYLUM SPINOSUM L.

Additional bibliography: Bocq., Adansonia 3: [Rev. Verbenac.] 223. 1863; Lefroy, Bull. U. S. Nat. Mus. 25: 97. 1884; Achart, Quinz. Cent. Pl. Ind. 145. 1905; L. H. Bailey, Man. Cult. Pl., ed. 1, pr. 1, 631 & 807 (1924), pr. 2, 631 & 807 (1925), and pr. 3, 631 & 807. 1938; Sandw., Kew Bull. Misc. Inf. 1938: 373. 1938; L. H. Bailey, Man. Cult. Pl., ed. 1, pr. 4, 631 & 807. 1944; Chittenden, Roy. Hort. Soc. Dict. Gard. 1: 493. 1951; Moldenke, Fieldiana Bot. 28: 1083. 1957; Moldenke, Am. Midl. Nat. 59: 385. 1958; Anon., Kew Bull. Gen. Index 1929-1956, 76. 1959; Gupta & Marlange, Trav. Sect. Scient. Inst. Franç. Pond. 3 (1): 78 & 79. 1961; Srinivasan & Agarwal, Bull. Bot. Surv. India 5: 80. 1963; E. E. Lord, Shrubs & Trees Austral. Gard., rev. ed., 66. 1964; Moldenke, Résumé Suppl. 14: 5. 1966; Jiménez, Supl. Cat. Fl. Doming. 1: 212. 1966; Moldenke, Phytologia 13: 313—315 (1966) and 14: 434. 1967.

Recent collectors describe this plant as a tree, 40 feet tall, the bark rough, gray in color, the young stems square, flowering spikes drooping, and the flowers fragrant, growing in shrubby woods behind coastal beaches. The corollas are described as "white" on R. J. Wagner 578 and on Webster & Miller 9829. Material is very often misidentified and distributed in herbaria as C. fruticosum L.

Kimber reports that this species was growing with Calophyllum antillanus and Tabebuia pallida in a roadside hedge of trees forming a windbreak for sugarcane fields exposed to the trade winds on Martinique, where there was an annual rainfall of 1—2 meters, also growing in porous dark-brown earth, and as a "weed tree common on roadsides and margins of mesophytic forest" on steep east-facing ravine slopes in deep red soil with lenses of volcanic ash. The same collector found it on Dominica as a small tree in hedges on east-facing red clay slopes exposed to the trade winds.

Lord (1964) adopts the name C. quadrangulare Willd. for this plant, but says that the C. quadrangulare of Jacquin and the C. cinereum of Jacquin are C. spinosum. He points out that the leaves in this species are longer than those of C. fruticosum and have a "drawn out end". It requires protection from frost when cultivated in Australia.

Achart (1905) describes the plant as "Arbre de 20 à 60 pieds de haut, acclimaté dans l'Inde. Le bois sert à faire des instruments

de musique, d'où son nom de bois à guitare." Srinivasan & Agarwal (1963) record it from Lahore and from Ferozepur, Punjab, and West India, but whether as naturalized wild plants or cultivated is not clear.

Additional citations: PUERTO RICO: R. J. Wagner 578 (S). LEEWARD ISLANDS: Dominica: Kimber 849 (Ws). WINDWARD ISLANDS: Martinique: Kimber 524 (Ws), 1895 (Ws), 2035 (Ws). TOBAGO: Webster & Miller 9829 (S).

CITHAREXYLUM SUBFLAVESCENS Blake

Additional bibliography: Moldenke, Phytologia 13: 315--316. 1966.

Additional citations: VENEZUELA: Mérida: Bernardi 2069 (S).

CITHAREXYLUM TRISTACHYUM Turcz.

Additional bibliography: Moldenke, Inform. Mold. Set 51, 2. 1956; Liogier, Rhodora 67: 350. 1965; Moldenke, Phytologia 13: 317. 1966; Moldenke, Résumé Suppl. 14: 8. 1966.

Recent collectors describe this plant as a bush, 9 feet tall, or a tree, 15 feet tall, with black fruit in March, growing in pastures at 1700 feet altitude.

Additional citations: CUBA: Las Villas: R. A. Howard 6629 (N). Oriente: Ekman 4874 (Mi). JAMAICA: Yuncker 18324 (Mi).

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BOOK REVIEWS

Alma L. Moldenke

"An Evolutionary Survey of the Plant Kingdom" by R. F. Scagel, R. J. Bandoni, G. E. Rouse, W. B. Schofield, J. R. Stein, and T. M. C. Taylor, xi & 658 pp., illus. Wadsworth Publishing Company, Inc., Belmont, California, second printing, 1966. $11.50.

A series of successful classroom experiences in group or master teaching of a one year botany course for second-year students at the University of British Columbia, Canada, has been transformed from the ephemeral oral form to this excellent text written by the same participating teacher-specialists. The approach is holistic, yet modern and intellectually stimulating. The content is rich, full, accurate, modern, and definitely not difficult nor stuffy.

This is an educational treasure to put before a student. Terminology is quite consistent, drawings and illustrations are excellent and genuine teaching aids, and the print is clear, clean, and easy to read. The bibliography is well chosen, the glossary helpful, and the index thorough.

I wish the work on the angiosperm groups was given in as much detail as that of the lower plants. Very surprisingly the lists of vascular plant groups on the back cover separate the very similar and extremely closely related Verbenaceae and Labiatae by "several inches" into different orders!

"Flora of Texas" by Cyrus Longworth Lundell and collaborators. Volume I, xi & 407 pp., illus. Texas Research Foundation, Renner, Texas. 1966.

With this presentation volumes 1 and 3 are now completed. This volume includes monographic treatments of the Pteridophyta by D. S. Correll, Boraginaceae by I. M. Johnston, Acanthaceae by D. C. Wasshausen, Polemoniaceae by E. T. Wherry, Gymnospermae by D. S. Correll, Potamogeton by E. C. Ogden and Scleria by E. L. Core. The work is very carefully done. The many full plate drawings are very clear and well detailed.

"A Handbook of Systematic Botany" by Subhash Chandra Datta, xv & 435 pp., illus. Eastend Printers in Calcutta 14, Asia Publishing House in New York City 10019 and Taplinger Publishing Co. distributors in New York City, N. Y. 10003. 1965. $9.50.

Here is a needed, comprehensive, readable text on a topic not previously covered for the whole country of India. Following the Bentham & Hooker system, it gives compressed, basically accurate descriptions of 70 angiosperm families. Part I is an introductory development of principles and practices of taxonomy in clear-cut but old-fashioned style. Parts II and III comprise the bulk of this work analyzing the plant families called "natural orders". Obvious line drawings of pertinent floral and other characteristics clarify the text. Part IV deals with such special topics as evolution, biochemistry, etc., but not with sufficient exposure to modern studies in serology, chromosome patterns and numerical taxonomy. Part V consists of such aids to taxonomic studies as family keys à la Gray, identification of selected genera and a glossary of native plant names from 17 of the most common languages.

There is a useful appendix explaining scientific naming, a valuable reference list of "musts" for the student which hopefully the college library can provide. From them the author should have captured a presentation technique that is more interesting and challenging. The index is useful. Because of poor paper and mediocre photographic printing the central plates could better have been replaced by more drawings. The print is better than that in many Indian texts; nevertheless, theory on p. xv, Apocynaceae on plate 7 and Sansevieria on plate 14 are misspelled. The author uses "verbain" instead of the usual "vervain". Usually the keys are constructed so that students will not have major troubles following them. Only occasionally, as on p. 32, do they have to choose between "thalamus long" and "thalamus shorter" with no concrete measure as a guide.